White Paper

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Project Director: Lucinda Barnes

Institution: University of California, Berkeley

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White Paper

Grant Number PF-50365-13
Providing a Cold Storage Unit for Preserving the Pacific Film Archive
Principal Investigator: Lucinda Barnes

Regents of the University of California

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Project Activities

Generous funding from the National Endowment for the Humanities supported the purchase and installation of a new 540-square foot walk-in cold storage vault in the Pacific Film Archive's (PFA) off-site collections storage facility in Richmond, California. The cold storage vault houses the film archive's unique and vulnerable motion picture negatives and original elements—our most important holdings and those in the greatest danger of deterioration.

In late 2013 through 2014 we secured additional funding to supplement the NEH award. In early 2014, the project team—comprised of PFA's Film Collection staff and Chief Administrative Officer Richard Tellinghuisen, in partnership with the UC Berkeley Capital Projects office—had an initial meeting. Thereafter, Film Collection staff reviewed current mobile shelving products and researched recent advances in cold storage to ensure our requirements for the project would achieve best practices and greatest efficiency. PFA adapted to a revised schedule necessitated by staffing changes at Capital Projects during a period of transition in that University department. In the fall of 2014, the project team met to prepare for project initiation and design and continued to work closely through the following months. The initiation phase included reviewing and confirming design criteria and identifying potential consultants to develop the final design documents.

The project team, with Oakland-based consultants Shah Kawasaki Architects, developed electrical, plumbing, ventilation, and fire safety designs for the cold storage room so that it is integrated with the entire collections facility, which houses collections from a range of key UC Berkeley museums and libraries in secure, compartmentalized, and environmentally-controlled storage vaults designed for their specific needs and requirements. Mr. Tellinghuisen and Film Collection Curator Ms. Nagai reviewed the drawings and met with the consultants and Capital Projects to ensure final construction plans met our needs and were approved by the Fire Marshal and State Architect.

In March 2015, the bidding process for the construction and installation of the unit began, and in May 2015, the University awarded the construction bid to Burlingame-based general contractor Rodan Builders, Inc. Engaging a number of qualified subcontractors, Rodan Builders subsequently developed the construction plan and recommended equipment to meet our requirements for the cold storage unit. In July 2015, Rodan Builders presented their initial submittal, including dimensions and shop drawings. Shah Kawasaki Architects then made revisions to the submittal after careful review, discussion, and approval by the project team.

While waiting for the delivery of the components for the prefabricated enclosure system and climate control equipment purchase, Rodan Builders completed all required upgrades to electrical, plumbing, and security installations, and ordered the shelving units. Rodan contracted with a well-respected local Spacesaver vendor that in the past did excellent work installing compact shelving for the PFA Film Library and Study Center. Based on PFA's specified shelf dimensions (for 16mm and 35mm film cans), this vendor presented a detailed drawing and proposal which met our needs.

The cold storage unit was fabricated in summer 2015 and Rodan completed installation in fall 2015, with the cooperation of the shelving vendor. PFA staff and Capital Projects held a review meeting with Shah Kawasaki Architects and a consulting engineer to discuss several points about the installed cold storage unit, none of which presented major concerns. Rodan subsequently resolved minor issues, and key project staff moved forward with the remainder of project implementation. In early December 2015, the HVAC system was turned on, beginning the sixty-day conditioning period, during which the monitoring of the interior environment also began.

During fall of 2015 through the first half of 2016, Film Collection staff prepared baseline condition reports on designated films, testing reels for vinegar syndrome if necessary; rehoused films in archival polypropylene cans; supervised the move of film materials into the new cold room; monitored environmental conditions; conducted an inventory; and updated location records. In the lead-up to this phase of the project, Film Collection staff determined the film materials prioritized for cold storage, based on rarity and condition and in consultation with PFA film curators and a group of advisors who have used the film collections for research and teaching. Prior to the move of the collections to the cold storage vault, Film Collection staff calculated the maximum quantity of works that could be stored now while allowing space for future acquisitions, and created detailed maps, organizing film locations by size in order to maximize shelving capacity. (See Appendix A: BAMPFA Cold Room Shelf Map). Our extensive advance planning resulted in a smooth move which confirmed the accuracy of estimates for shelving the designated film materials.

In January 2016, halfway through the HVAC conditioning period, Film Collection staff selected a representative sampling of film originals, preservation elements, and prints to place in the cold room in order to test how the system performed with a partial load of materials. After an additional thirty days monitoring the HVAC performance as it responded to the load, the contractor made adjustments to the equipment as needed to achieve the desired environment. Given the fluctuations of temperature and RH that all archives have encountered with their HVAC systems, Film Collection staff took extra care to monitor environments of both our general vault and the cold storage unit, for successful transition of film elements. As a result of advance planning and following firm requirements set forth by PFA, Capital Projects, and Shah Kawasaki, we are delighted to report that the HVAC system has delivered a stable environment of 45 degrees Fahrenheit (+/- 2ºF) temperature and a 30% (+/-5%) relative humidity, as planned—a crucial upgrade from the vault environment of 60 degrees Fahrenheit and 45% relative humidity. [See Appendix B: Hobo data logs that reflect the stability of the cold room environment over the course of the project, with minor fluctuations occurring only during periods of abnormal activity within the space (e.g., punchwalk on February 9, 2016 and relocation of films into cold room on February 29, 2016). Analog hygrothermograph monitoring confirmed the same results.]

In late February 2016, Film Collection staff supervised the move of our most unique film holdings and continued to monitor conditions in the cold storage unit. Approximately 5,000 film reels of originals, preservation elements, and important prints were organized efficiently on mobile shelving. Almost all of the films in the cold room are unique materials, in that they are the camera originals and preservation negatives which ensure that future reproductions can be

made from the best source elements. Additionally, archival reference prints and exhibition prints serve as primary evidence of the formal and aesthetic qualities intended by the filmmakers.

(See Appendix C: Representative photographs, before and after collections move)

A selection of prioritized works moved to the cold storage vault include:

- originals for films by Bruce Baillie, Scott Bartlett, Nathaniel Dorsky, Lawrence Jordan, George Kuchar, Gunvor Nelson, Trinh T. Minh-ha, Wayne Wang, and others
- preservation negatives for works by Charles Burnett, Bruce Conner, Jim McBride, Chick Strand, and others
- exhibition quality prints by Bay Area avant-garde filmmakers, many of which were featured in the BAMPFA-curated series "Radical Light: Alternative Film and Video in the San Francisco Bay Area, 1945–2000," including *All My Life* (Bruce Baillie), *Pneuma* (Nathaniel Dorsky), *Schmeerguntz* (Gunvor Nelson and Dorothy Wiley), *A Movie* (Bruce Conner), *Waterfall* (Chick Strand), *Life and Death of a Sphere* (Dorsey Alexander), *Tribulation 99* (Craig Baldwin), *The Bed* (James Broughton), *Deaf/Punk* (Richard Gaikowski), *Pastorale d'été* (Will Hindle), *Father's Day* (Lenny Lipton), *A Visit to Indiana* (Curt McDowell), *Oh Dem Watermelons* (Robert Nelson), *Horror Dream* (Sidney Peterson and Hy Hirsh), *Riverbody* (Alice Anne Parker Severson), *Peggy and Fred in Hell: The Prologue* (Leslie Thornton), *Sol* (Edward Silverstone Taylor), and *North Beach* (Dion Vigne)
- printing masters and exhibition quality prints of films selected for inclusion in the National Film Registry, including *Allures* (Jordan Belson), *Castro Street* (Bruce Baillie), *Chan is Missing* (Wayne Wang), *David Holzman's Diary* (Jim McBride), *Fake Fruit Factory* (Chick Strand), *Hours for Jerome* (Nathaniel Dorsky), *I, An Actress* (George Kuchar), *Notes on the Port of St. Francis* (Frank Stauffacher), *Offon* (Scott Bartlett), *Our Lady of the Sphere* (Lawrence Jordan), and *Quasi at the Quackadero* (Sally Cruikshank)
- important films unavailable in other American archives such as the early short films of Alexander Black (the so-called Grandfather of the Picture Plays), home movie footage of Orson Welles directing the recently rediscovered *Too Much Johnson*, Beat-era experiments and home movies of Dion Vigne and Edward Silverstone Taylor, and numerous rare Japanese and Georgian 35mm features, including *Magdana's Donkey / Lurdzha Magdana/Magdanas lurja (*Tengiz Abuladze, Revaz Chkheidze), *My Grandmother / Moya Babushka/Chemi Bebia* (Kote Mikaberidze), *Our Courtyard* / *Nash dvor* (Rezo Chkheidze), *Saba* (Mikhail Chiaureli), *The Swimmer / Plovec* (Irakli Kvirikadze) and *Three Lives, Parts 1 & 2* (Ivan Perestiani), presented in PFA's extensive Georgian cinema retrospective and tour in 2014-2015
- Theos C. Bernard–G. Eleanore Murray Collection, camera original and preservation elements of 16mm footage shot in Tibet and India in the 1930s
- Vietnamese and Vietnam-themed films, including *Môt vài bang chung vê tôi ác chiên tranh hoá hoc cua dê quôc my o miên Nam Viêt-nam* (film produced in 1964 by the National Liberation Front of South Vietnam), *79 Springtimes of Ho Chi Minh* (Santiago Alvarez), *Vietnam Day Berkeley* (Ernest Callenbach), *Time of the Locust* (Peter Gessner), and *Surname Viet Given Name Nam* (Trinh T. Minh-ha)

Film Collection staff inventoried all items located in the new cold room, scanned individual barcodes, ran an inventory report, and reconciled any discrepancies between this report and the list of elements designated for this storage area. Staff also updated records with new location information about the holdings. In addition to successful completion of the cold room project, with funding from other sources Film Collection staff worked with the same team of professional movers to shift 35mm and 16mm prints within the adjacent general film vault, reallocating space made available when films were moved to cold storage—an important gain for managing access.

Film Collection staff will assess remaining storage capacity within the cold storage room and will plan for future acquisitions, in the context of PFA collection policies and in keeping with best practices. They will continue to use the cold room to house the most unique and vulnerable holdings. When accessing materials stored in the cold room for inspection, conservation, restoration, or making new prints, digital masters, or access copies, Film Collection staff will utilize the general vault for staging films between cold storage and the outside environment.

Changes in project activities

In June 2015, NEH approved BAMPFA's request for a twelve-month no-cost extension, changing the project end date from September 30, 2015 to September 30, 2016. The no-cost extension was requested due to a number of factors that contributed to slight delays in implementation. First, delays resulted from the retirement of several senior staff members at the UC Berkeley Capital Projects office and a subsequent restructuring of that department. As a result, Capital Projects was restricted in terms of staff capacity, and a number of major campus construction projects were competing for limited staff time. Also, the expansion of an art storage space at the off-site collections facility went through a minor redesign, and since that construction had been scheduled to precede the cold storage project, our cold room installation was delayed. An extension allowed the project team to keep project activities on track according to the work plan approved by NEH.

In summer 2016, Project Director Lucinda Barnes retired after working at the film archive for fifteen years. At the time of her departure, the project team had successfully completed the construction and installation of the cold storage room, and Film Collection staff had already moved the collection to the cold storage vault. Following Ms. Barnes' retirement, Mr. Tellinghuisen and Film Collection staff continued to work closely with Capital Projects to ensure all phases of the project and final details were completed.

Accomplishments

We are pleased to report that the project team—PFA's Film Collection staff and Chief Administrative Officer Richard Tellinghuisen, in partnership with the UC Berkeley Capital Projects office—successfully completed the installation of a walk-in cold storage unit at its offsite collection storage facility, according to the activities stated in the work plan and approved by NEH.

The project's outcomes, as stated in the proposal, are to mitigate natural deterioration and to significantly prolong the life of unique materials in the film archive's collection, ensuring future,

public access to this important heritage for film scholars and the general public. Proper storage greatly affects the life expectancy and condition of films, guaranteeing their useful life for hundreds of years. The project secures the future of approximately 5,000 of the PFA's most fragile film elements, including original camera rolls and preservation negatives—the master elements from which prints are made. Representing an urgent improvement that adheres to best practices in the field, the stand-alone cold storage unit marks a major milestone in the care and preservation of the film archive collection.

Summaries on the design and performance specifications for the cold storage room are provided below. (For more details, please see Appendix D: As Built drawings for the Cold Room and compact shelving.)

Cold Storage Room: The cold storage room is built adjacent to PFA's current vault space, to allow for easy access to the entire collection and for effective staging. The final customized, prefabricated, and panelized cold storage room has an area of 540 square feet (27 feet x 20 feet x 10 feet high, nominal clear interior size). Four-inch thick, polyurethane industrial insulated metal wall and ceiling panels, (with seismic anchoring devices to secure panels to existing construction) have 26-gauge galvanized steel skins inside and out with stucco embossed texture and a USDA approved white finish. The room has a 36-inch x 84-inch in-fitting swing door with the same finish as the wall panels. Lighting includes T-5 energy efficient 4-tube fluorescent vapor proof lighting fixtures with motion sensors and a switch outside of the door. Resinous flooring with an epoxy floor finish was applied over the existing concrete slab.

The ultra-energy efficient, Cold Control refrigeration system is designed to maintain an environment of 45 degrees Fahrenheit (+/- 2ºF) and a relative humidity of 30 percent (+/- 5%) to limit moisture inside the cold room. A CC100 Dehumidification system was also installed to ensure the 30 percent relative humidity. A 2-inch dial thermometer is mounted on the exterior wall next to the door. A condensing unit is mounted on the roof of the cold storage room. The unit has a complete split refrigeration system—two redundant refrigeration systems with alternating operation. The refrigeration system also includes all piping and electrical hookups and a control panel for all electrical components.

Integration of the cold storage unit into the collections facility system allows remote monitoring of the environment. Alarm notifications regarding significant temperature and humidity fluctuations are automatically sent to PFA Film Collection and Security staff, allowing for quick response.

Shelving: In consultation with several archives and museums, the project team considered options for the most effective and suitable mobile compact shelving. After making comparisons with a number of products, the project team selected Spacesaver, a reputable brand recommended and used by many colleagues at peer institutions. Maximizing storage capacity within the room, while achieving the sizes of shelves needed to accommodate the collection, was a major priority. Mobile shelving requires 33-50% less square footage to store the same quantity of materials as conventional static shelving and contributes to energy efficiency by increasing the thermal load. The selected Spacesaver mobile compact shelving represents a significant upgrade

over the film archive's fixed shelving system and is essential to maximizing the benefit of the cold storage room.

The film elements, placed inside cans of several sizes, are stored horizontally on heavy-duty metal shelving with an acid-free powder coat finish that does not off-gas. The height of the exterior top surface of the shelving units is approximately 7'6" with the bottom shelves 7" above the surface of the platform (which accommodates the tracks). Vertical spacing between shelves is set at 15 ¾ inches. The aisle between rows of shelving is 45" wide when fully open, and all aisles are ADA compliant. There is enough allowance to enable 1 to 2 inches of air circulation between all rows. We chose to exclude the options of pull-out reference shelves, shelf dividers, and electrical-assist controls from the design.

Four sizes of shelving were created for storage efficiency:

1) All shelves on the stationary row against the rear wall are 18" deep x 36"–42" wide.
2) Four rows of back-to-back shelves are 18" deep x 30"–36" wide; each of the units has a maximum depth of 36.5"
3) Three rows of back-to-back shelves are 13" deep x 30"–36" wide; each of the units has a maximum depth of 26.5"
4) All shelves on the stationary row against the front wall are18" deep x 36"–48" wide

Fire Protection: The collections facility overall is protected by a code-compliant fire sprinkler system. Six sprinkler heads, including quick response sprinklers, inside the cold storage room are connected to the existing sprinkler system and meet local codes and the California Building Code. The sprinkler heads are arranged so that each storage rack and rack elevation has coverage.

Security: The cold storage room is integrated with the security system installed at the collections facility, in addition to the following security measures: a single contact point at the entrance to the cold storage unit; high quality doors and mechanical locks; a security card reader; and access restricted to authorized Film Collection staff. An electronic high/low alarm and safety control system is connected to the central Facility Management and Control System. Alarm notifications go immediately to the UC Police Department, on duty 24/7. After dispatching officers, UCPD promptly contacts our Security staff, who coordinate with Film Collection staff.

Audiences

This project has been integral in educating a wide range of constituencies about the importance of archiving motion picture film and how it is an essential aspect of the organization. Locally, the Film Collection staff has shared the results of the project with staff, the Board of Trustees, Collections Committee, Film Committee, individual donors that contributed funds to the project, and many others interested in film collection activities and collections care. Early in the project, the film archive staff showed the existing film vault to a number of potential donors, informing them about the NEH-funded cold storage project and the importance of proper archival storage. In August 2016, a select group of visitors were given a tour of the general vault and cold room. This high-touch engagement with long-time supporters and new patrons of the film archive

resulted in greater interest in the cold storage project, giving them a broader understanding of PFA's ongoing commitment to preservation.

On September 1, 2016, Film Collection Curator Mona Nagai and Head of the Film Library & Study Center Nancy Goldman gave a presentation on film and video conservation and preservation to a Fall 2016 Mellon Graduate Seminar in Objects Analysis, taught by UC Berkeley history of art professors Patricia Berger and Lauren Kroiz. The course, supported in part by The Andrew W. Mellon Foundation, drew on the expertise of senior conservators in the Bay Area to give graduate students in the history of art and other related graduate programs a better understanding concerning the nature of various materials. Ms. Nagai and Ms. Goldman emphasized proper storage as an important strategy for film preservation, sharing information about PFA's film vault and the new cold room, with specifics about the environments and their relationship for staging films. They also showed film and video materials from the collection to give students a sense of the ways that time-based work also requires archiving and preservation. As results of the project continue to be shared with larger audiences, PFA staff anticipates more interest from the UC Berkeley academic community, researchers worldwide, and peer institutions in learning about best practices in film preservation and proper storage.

In addition, as stated in the original proposal, the environment of the cold room is estimated to achieve a gain of 400% or more in the projected longevity of materials stored there, as compared to PFA's film vault. The materials prioritized for the new cold storage room will be the basis for future prints and best quality masters for copying to current formats, whether digital or analog, for increased access and viewing by future audiences.

Evaluation

In May 2016, Film Collection staff, Richard Tellinghuisen, our Security and Facilities Administrator Maria Cisneros, UC Capital Projects, UC Physical Plant stationary engineers, and Shah Kawasaki's design architect and engineer met with Rodan Builders to evaluate the project. Following months of monitoring and a number of inspections and walk-throughs, the consensus judgment was that the cold room construction, HVAC equipment, and performance were excellent. Rodan's subcontractors were also present at the meeting to discuss directly with the veteran UC stationary engineers, who have decades of experience with other UC collections storage areas.

The engineers as well as Shah Kawasaki pointed out the redundancy of our cold room's HVAC system as an important feature. In our stated requirements for bid proposals, PFA staff had insisted upon this approach, based on our research, consultation with colleagues, and advice from stationary engineers. It was crucial that our budget allowed for a consulting specialist engineer on Shah Kawasaki's team. Throughout the project, we felt that our Capital Projects manager and consultants Shah Kawasaki worked to support our goals for best practices and maximum benefit for the care of the film collection, even though it can be cumbersome to navigate through complex institutional procedures.

One circumstance that would not necessarily apply to projects elsewhere is that our air conditioning equipment is on the roof of the cold room. This is necessary due to the footprint

space available to us and the adjacency of our general vault and other UC department's storage areas. Prior to construction, we had confirmed that such a location of HVAC equipment would not present technical issues. We addressed safe access to the equipment by providing a freestanding mobile ladder cart that is kept next to the cold room, always conveniently available.

Continuation of the Project

PFA is now well positioned to save our most vulnerable and rare holdings, as well as other special collections of value to the humanities through future acquisitions of film originals. At the same time, the cold room was designed as a part of a modular plan that fulfills the required temperature and relative humidity relationships between environments so as to allow efficiency in acclimatizing films. The offsite collections facility has adequate space for the development of additional dedicated storage spaces, with specialized microclimates for moving-image media; and long range plans include an additional cold room with lower temperature and RH to better protect color films and to allow further growth of the permanent collection. In order to improve the work space for film inspections, repairs, and other conservation activities necessary to provide access and maintain the collection, we will also develop a plan for an offsite Clean Room at the University's shared collections facility where the film and video vault and our new cold storage room are located. Best practices among film archives include having the equivalent of a laboratory space: a dust-free, stable environment with easily cleanable surfaces for the safe handling of motion picture film. PFA's new downtown building does not offer this possibility. Currently, there is space available in the University's facility, contingent upon funding for the UC Capital Projects Office to execute a construction project. A Clean Room will serve ongoing care of the collection and will facilitate inspecting and prepping films so that BAMPFA has the infrastructure to achieve the goal of digitizing and increasing access to more collection holdings. As we were advised in the IMLS-funded 2011 conservation survey by outside experts, we will assess staffing levels relative to responsible stewardship of the collection as well as the film archive's digitization goals.

While collaborative partnerships with other institutions were not formed as a part of the project, colleagues at other local, national, and international institutions—film archives, museums, peer professional associations such as FIAF, and cinemas committed to preserving the theatrical movie-going experience as well as preserving film materials—will benefit from this project in the future, whether through research requests, loan requests for exhibition and preservation projects, or collaborative film restoration projects with PFA.

Long Term Impact

Acknowledging the importance of preserving our film heritage for future generations, the project upholds the film archive's mission of ensuring and prolonging the useful life of rare and endangered works for future research, study, and exhibition. As an organization dedicated to the critical, cultural, historical, social, and political study of the moving image art form, PFA is committed to presenting and archiving the full spectrum of world cinema, from past to present. The PFA has long served as a valuable educational resource, providing UC Berkeley faculty and students from a range of academic disciplines, communities from the Bay Area and beyond, and researchers from around the world, access to many works that are not generally available to the

public. The unique and vulnerable holdings held in the new cold storage room will benefit these audiences. Timing of this project to coincide with the opening of our new building downtown, expanded Film Library and Study Center, and a major digitization initiative, is fortuitous. We will be able to offer much greater access to the collection going forward.

With regard to attracting non-federal funds for this project, BAMPFA Director Lawrence Rinder, Senior Film Curator Susan Oxtoby, and the Development team embarked on fundraising in late 2013 through 2014. Together, they successfully raised a major grant from UC Berkeley and donations from a number of individuals. Individual donations were raised in a number of ways, including invitations to private tours of the storage space for past and new donors to the film archive. Led by Ms. Nagai and Ms. Oxtoby, the tours provided a rare opportunity for patrons and prospective donors to see where and how our films and videos are stored and cared for, giving them new insight into, and more appreciation of, the workings of the PFA and the importance of proper storage.

Grant Products

While the cold storage unit and White Paper serve as the most tangible products of this grant-funded project, public promotion of the project's successes will ensure that they are shared with other archives, collecting institutions, as well as the general public.

Our *In Focus: The Role of Film Archives* lecture and screening series in February - March 2016 gave context and an opportunity to mention this project to our audiences. The project will also be shared with the broader public via the institutional website bampfa.org; print materials, including the film archive's quarterly Program Guide; social media; and other online platforms. Under the guidance of our new Director of Marketing and Communications, planned improvements to our website include a page which will spotlight the new cold storage room and its importance for the archival film collection. We will acknowledge NEH funding in all printed and electronic communications related to this project.

In addition to sharing best practices and lessons learned with peer institutions and the general public, the project will serve as a model for securing funding for similar projects and the steps necessary to reach the goal of acquiring proper storage for collections. As a project that will increase awareness of the collections held in trust by the Regents of the University of California, the project team plans to share results, successes, and discoveries widely with the UC Berkeley campus through meetings with other units interested in preservation and collections care. When appropriate, results will also be shared with institutional peers across the UC system as well as at other professional convenings.

Appendices

The enclosed documents contribute to an understanding of the project and its accomplishments to date: Appendix A: Cold Room shelf map; Appendix B: Hobo data logs that reflect the stability of the cold room environment over the course of the project; Appendix C: Representative photographs, before and after collections move; and Appendix D: As Built drawings for the Cold Room and compact shelving.

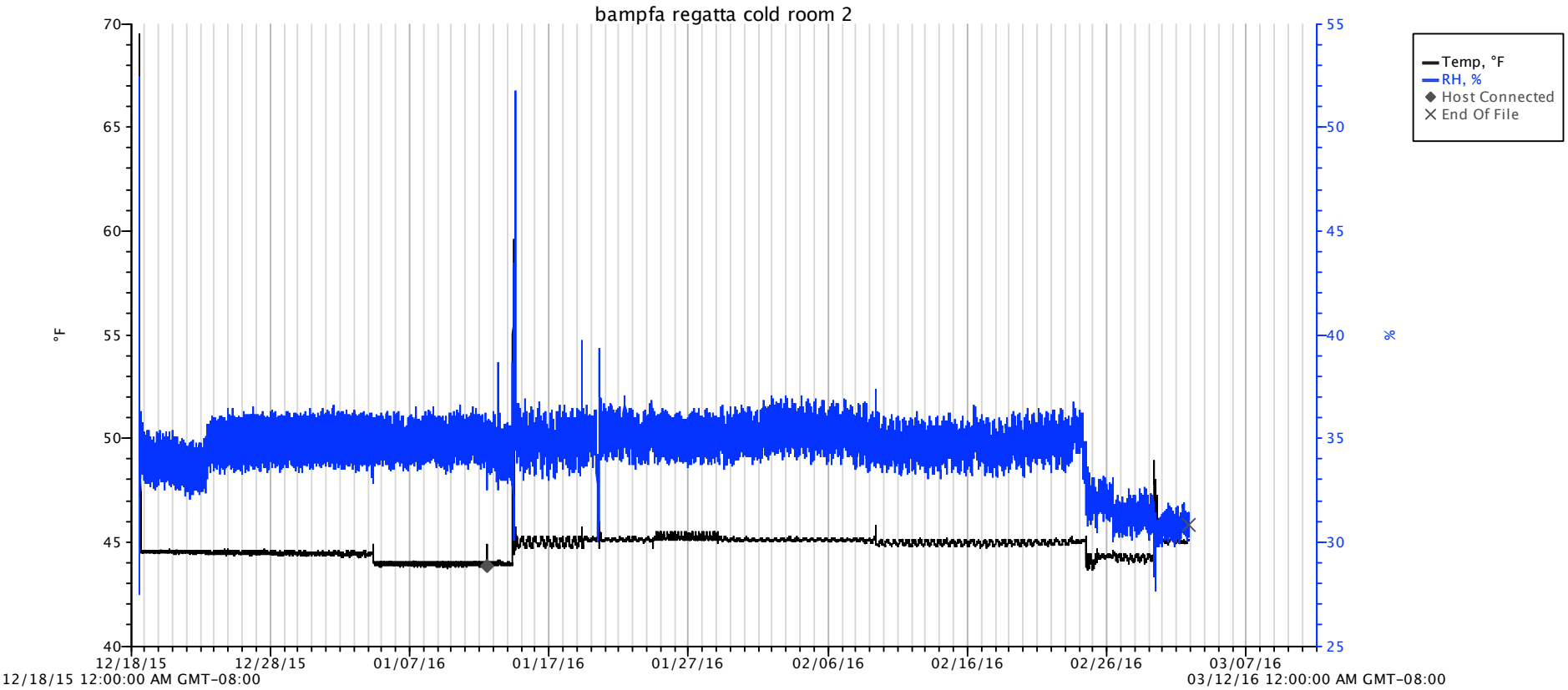
Appendix A: Cold Room shelf map

BAMPFA cold room at Regatta
Shelf map

P1⊙→	P2→	P3→	P4→	P5→	P6↙
↓O5	←O4	←O3	←O2	←O1	
N1→	N2→	N3→	N4→	N5↓	
↓M5	←M4	←M3	←M2	←M1	
L1→	L2→	L3→	L4→	L5↓	
↓K5	←K4	←K3	←K2	←K1	
J1→	J2→	J3→	J4→	J5↓	
I5✖	←I4	←I3	←I2	←I1	
H1→	H2→	H3→	H4→	H5✖	
↑G5	←G4	←G3	←G2	←G1⊙	
F1→	F2→	F3→	F4→	F5(Z)✖	
↑E5	←E4	←E3	←E2	←E1	
D1(A)→	D2→	D3→	D4→	D5↑	
C4(Z)✖	←C3	←C2	←C1		
B1(A)→	B2→	B3→	B4↑		
A4(Z)✖	←A3	←A2	←A1(A)		

35mm priority
16mm priority
Originals
Preservation
Oversize origs/pres

Appendix B: Hobo data logs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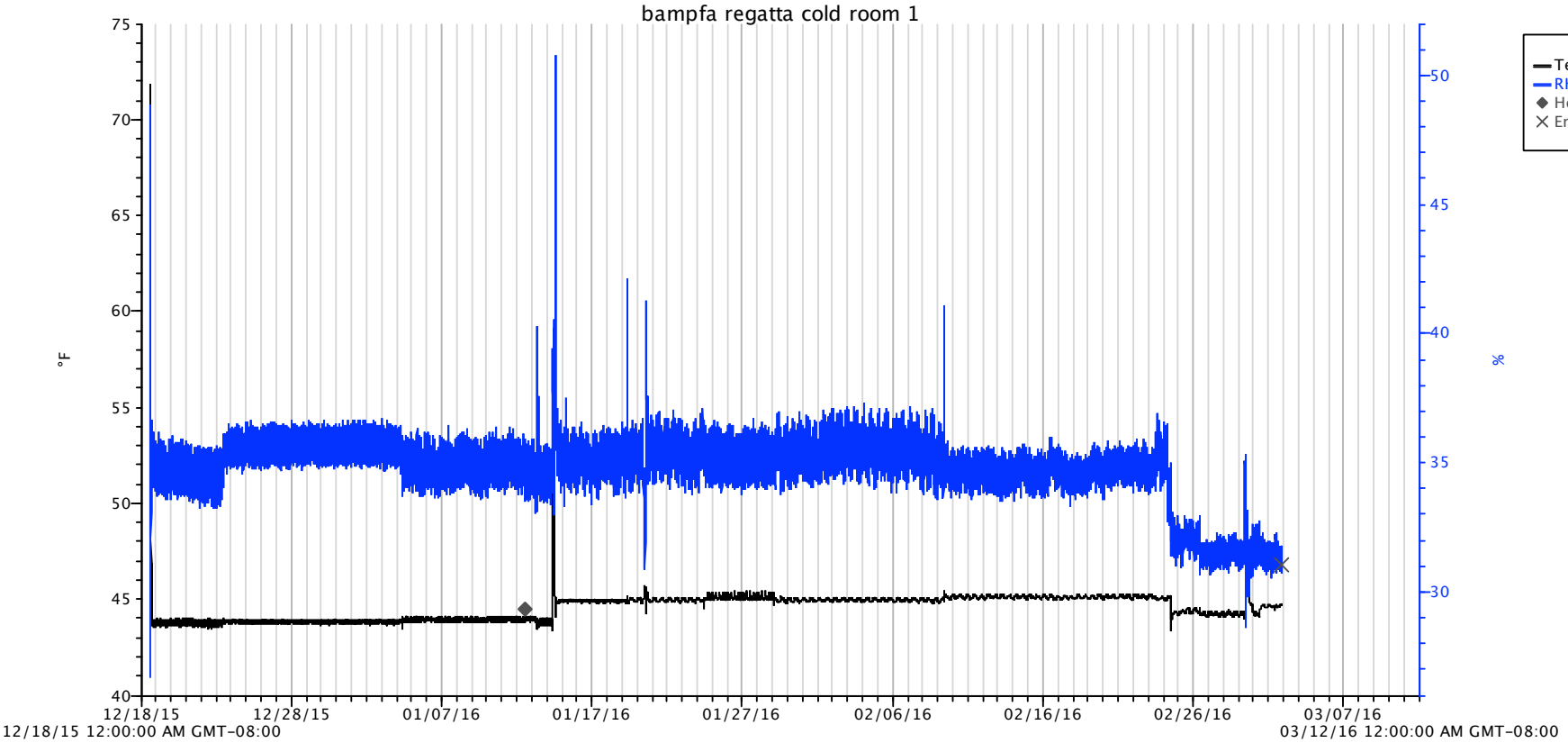
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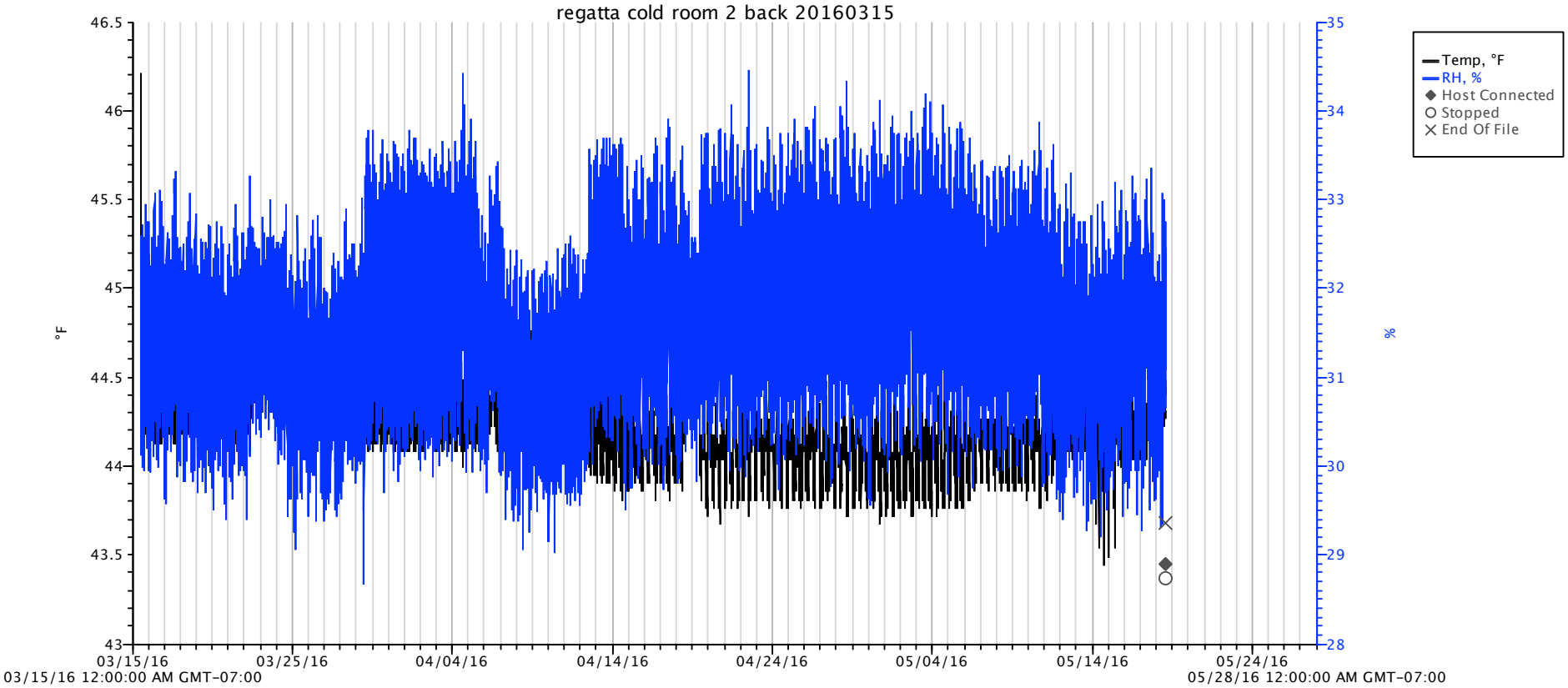
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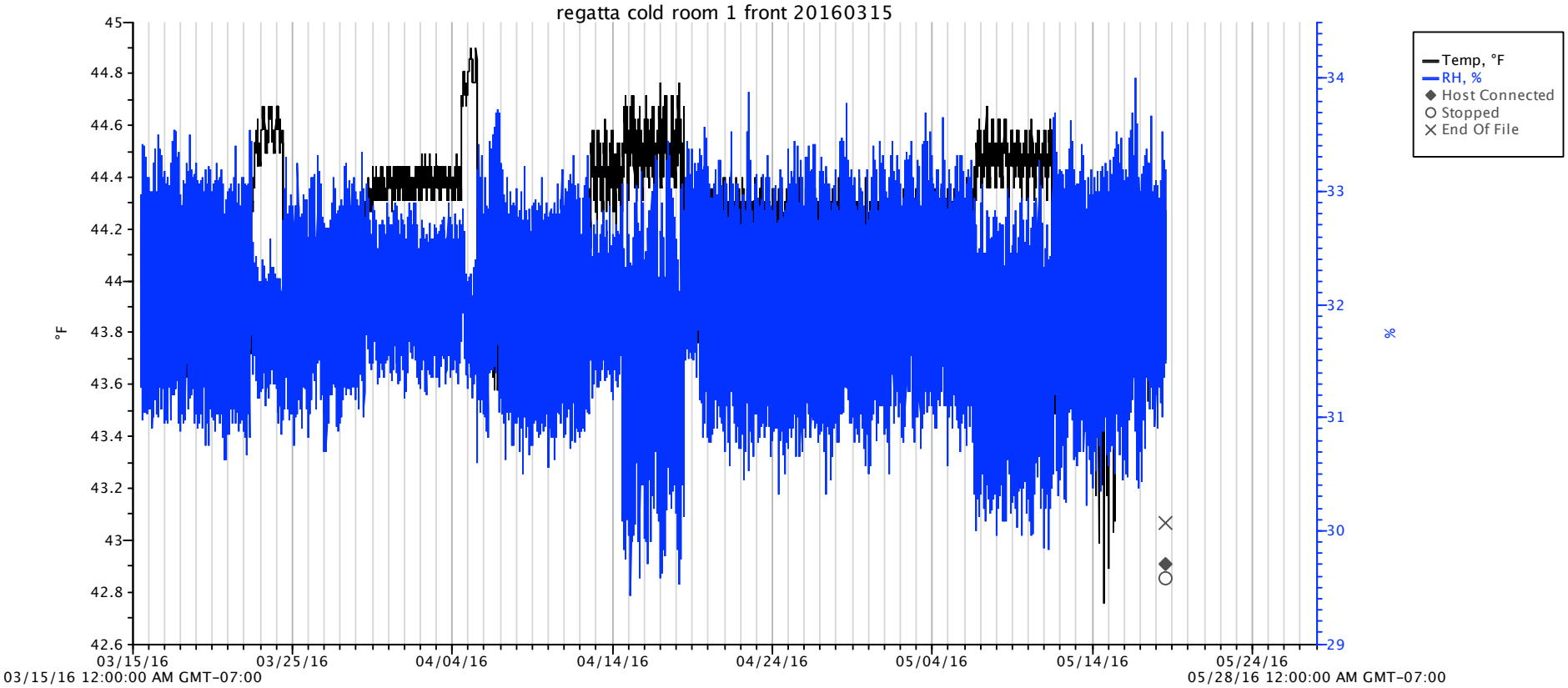
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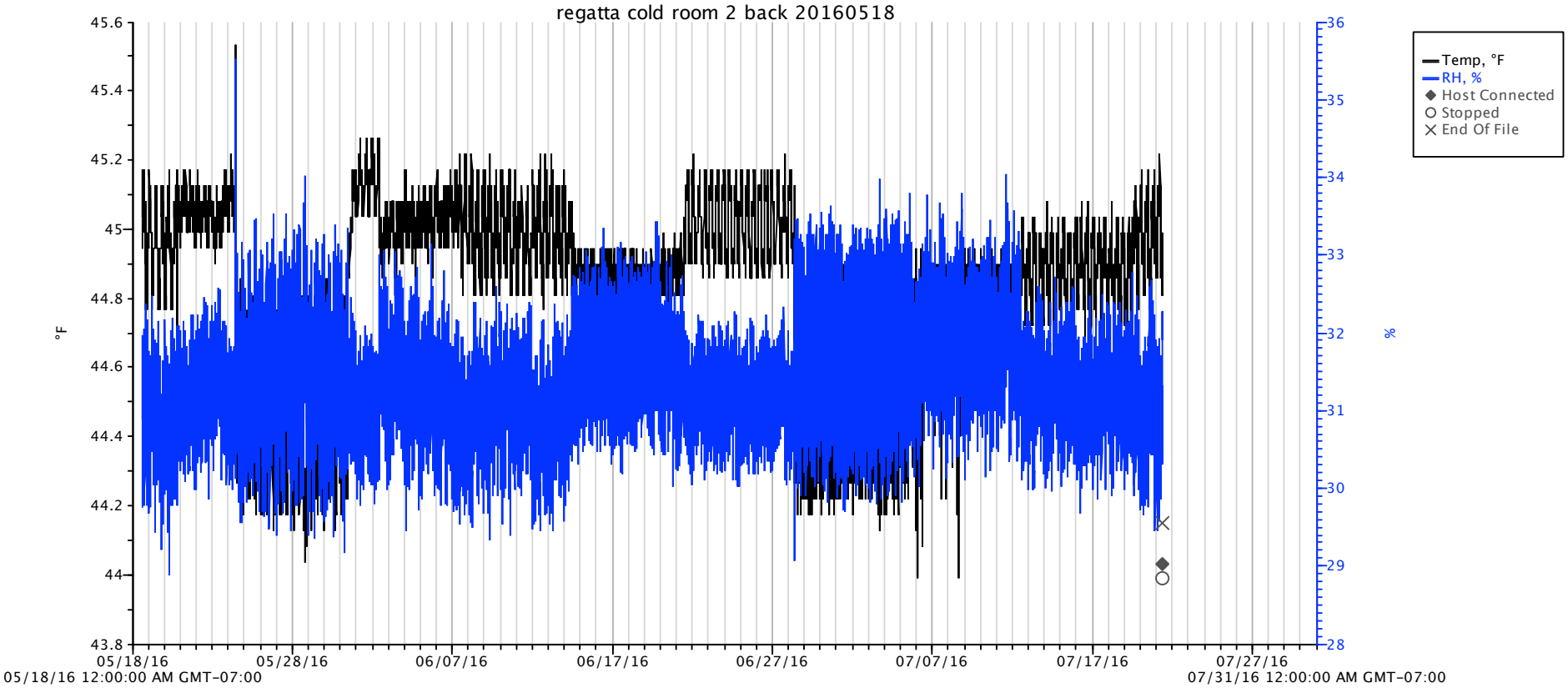
regatta cold room 2 back 20160518
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44.8
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Temp, °F
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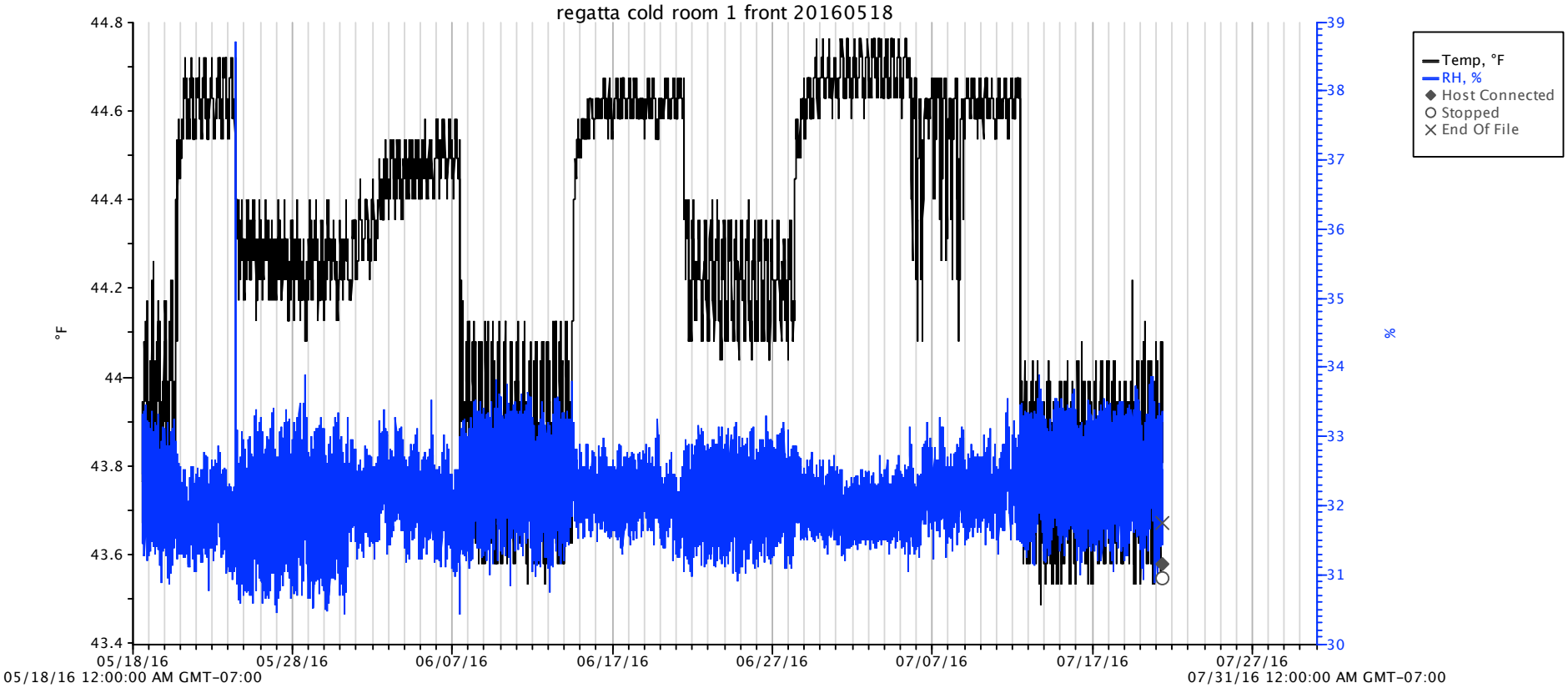
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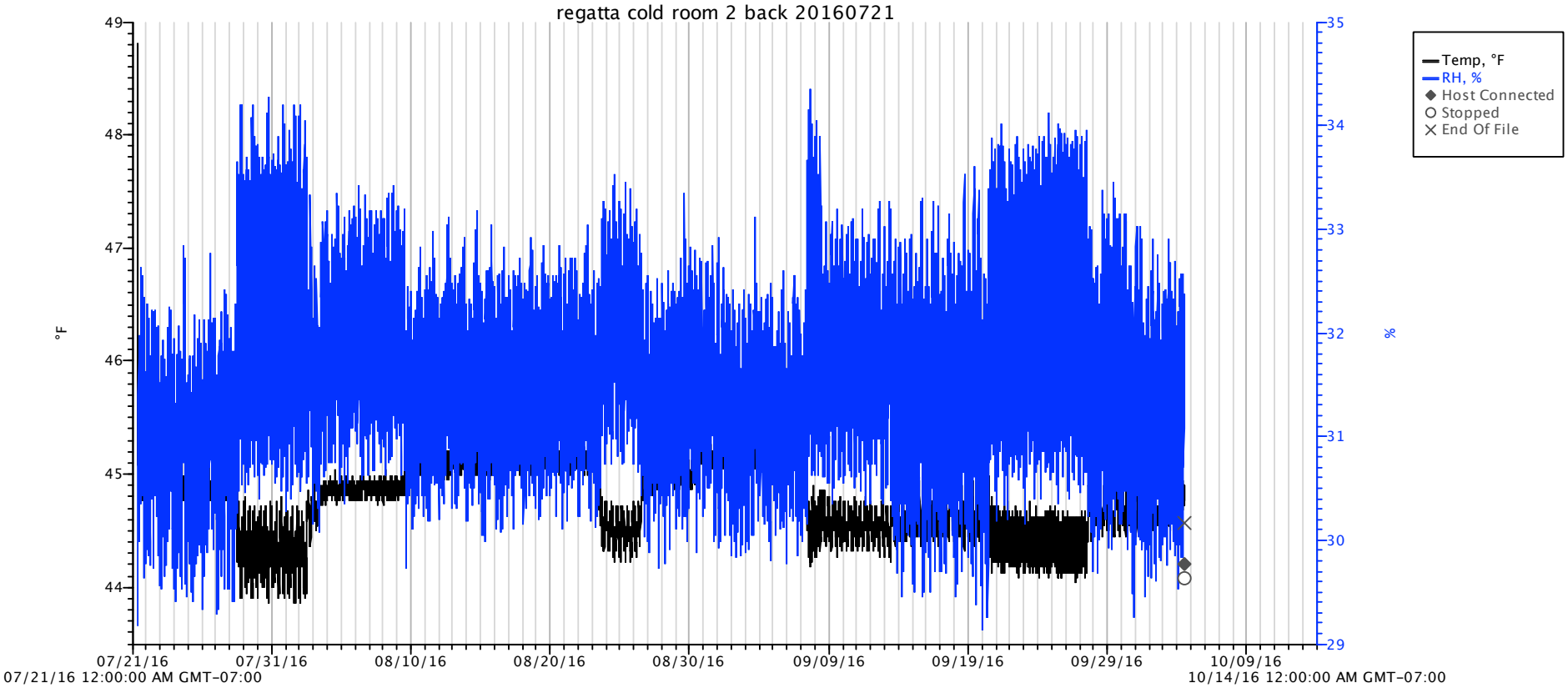
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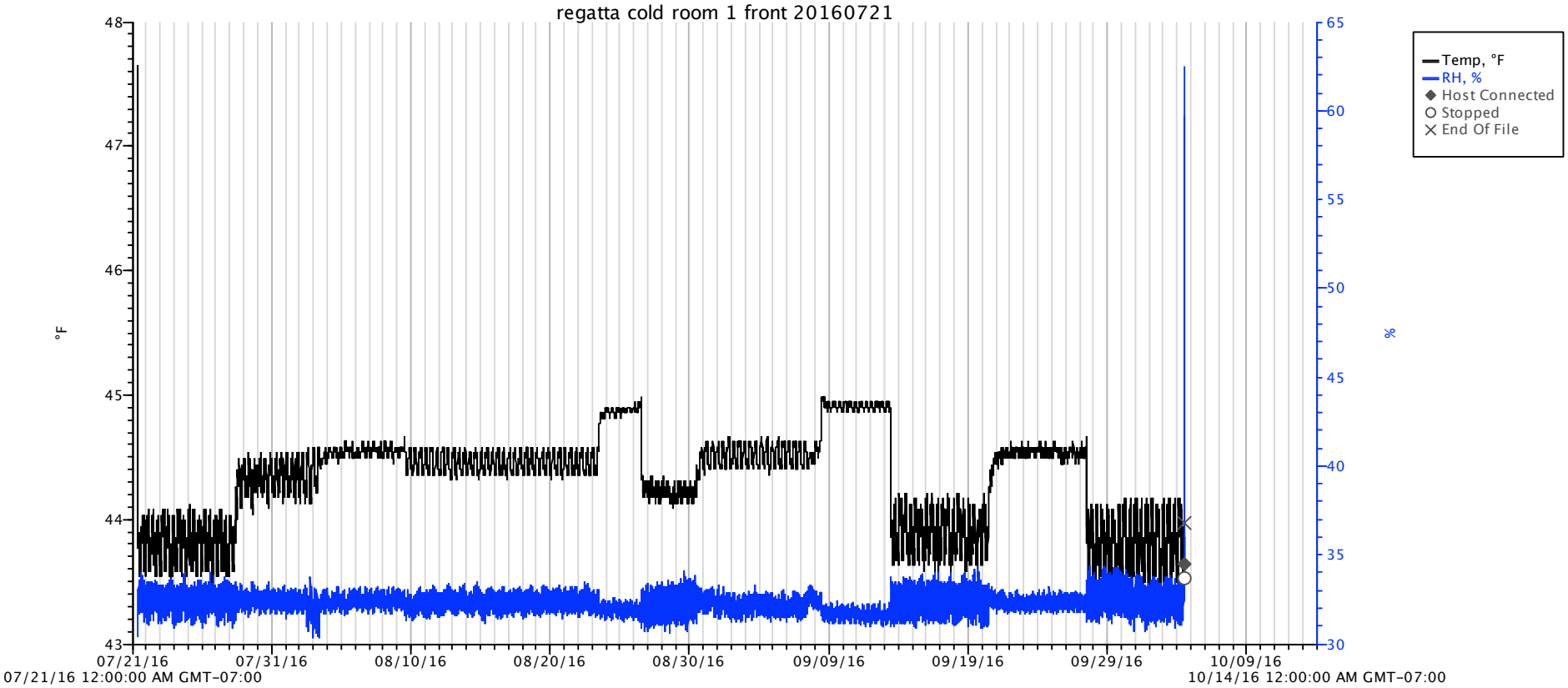
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Temp, °F
RH, %
Host Connected
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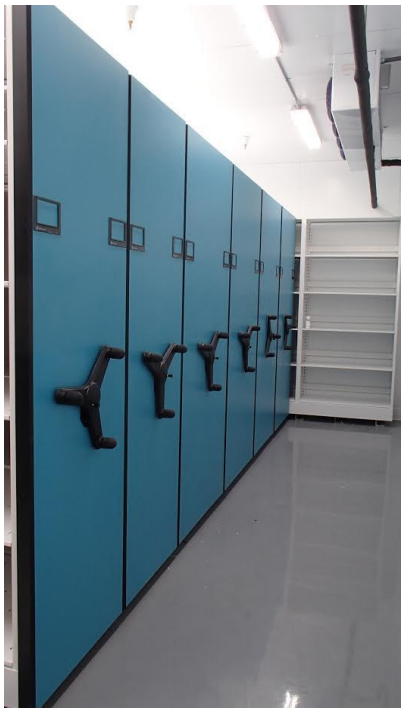
Appendix C: Representative photographs, before and after collections move

Appendix C: Representative photographs, before and after collections move

Door, with temperature and RH reader

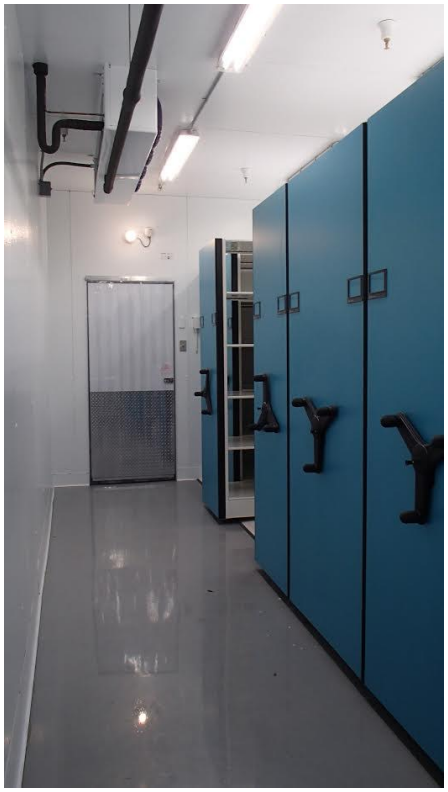
Honeywell monitor at 45ºF / 30% RH (dated 12/20/2016)



Spacesaver shelving, closed

Spacesaver shelving, partially open

Empty shelves prior to move-in



Spacesaver shelving, front door

16mm priority prints, organized by container size

16mm priority prints, with room for expansion

35mm priority prints, bottom row left empty for expansion

35mm priority prints, open row

35mm priority prints, view to back wall

Free-standing mobile ladder, a safe means of accessing the HVAC equipment on top of the cold room

Original film elements (Trinh T. Minh-ha Collection)

Preservation elements (Theos C. Bernard–G. Eleanore Murray Collection)

Original film elements (Allan Francovich Collection)

Appendix D: As Built drawings, Cold Room and compact shelving

REGATTA FACILITY SYSTEMS AND EQUIPMENT FOR ART AND FILM STORAGE

3200 REGATTA BLVD, RICHMOND, CA

UNIVERSITY OF CALIFORNIA AT BERKELEY (PROJECT # 12648A)

SYMBOLS

COLUMN OR GRID LINES

REFERENCE SYMBOL
LOCATION ON SHEET
SHEET NUMBER

DETAIL REFERENCE
LOCATION OF DETAIL "CUT"

DETAIL/ENLARGED PLAN REFERENCE
LOCATION OF DETAIL/ENLARGEMENT

SECTION/ELEVATION REFERENCE
DIRECTION OF SECTION/ELEVATION

INTERIOR ELEVATION
DIRECTION OF ELEVATION
LOCATION ON SHEET
SHEET NUMBER

EQUIPMENT CLOSET 205 — ROOM NAME & NUMBER

WALL SECTION AT 1 E3 RE: A1/A-110 3/4"=1'-0" — DRAWING TITLE
DRAWING FROM WHICH THIS DRAWING IS REFERENCED

DOOR NUMBER

LOUVERS

WALL TYPE

(N) ELEVATION (PLANS)

EXISTING ELEVATION

EXISTING ELEVATION (PLANS)

REVISION IDENTIFICATION

CLOUD AND DELTA IS A REVISION TO PERMIT, BID OR CONSTRUCTION DOCUMENTS. EACH DELTA NUMBER IS SPECIFIC TO THE PACKAGE ISSUED AND NOT NECESSARILY CONSECUTIVE WITH OTHER DELTA NUMBERS ON SHEET. EACH SHEET MAY NOT HAVE EVERY CONSECUTIVE DELTA NUMBER.

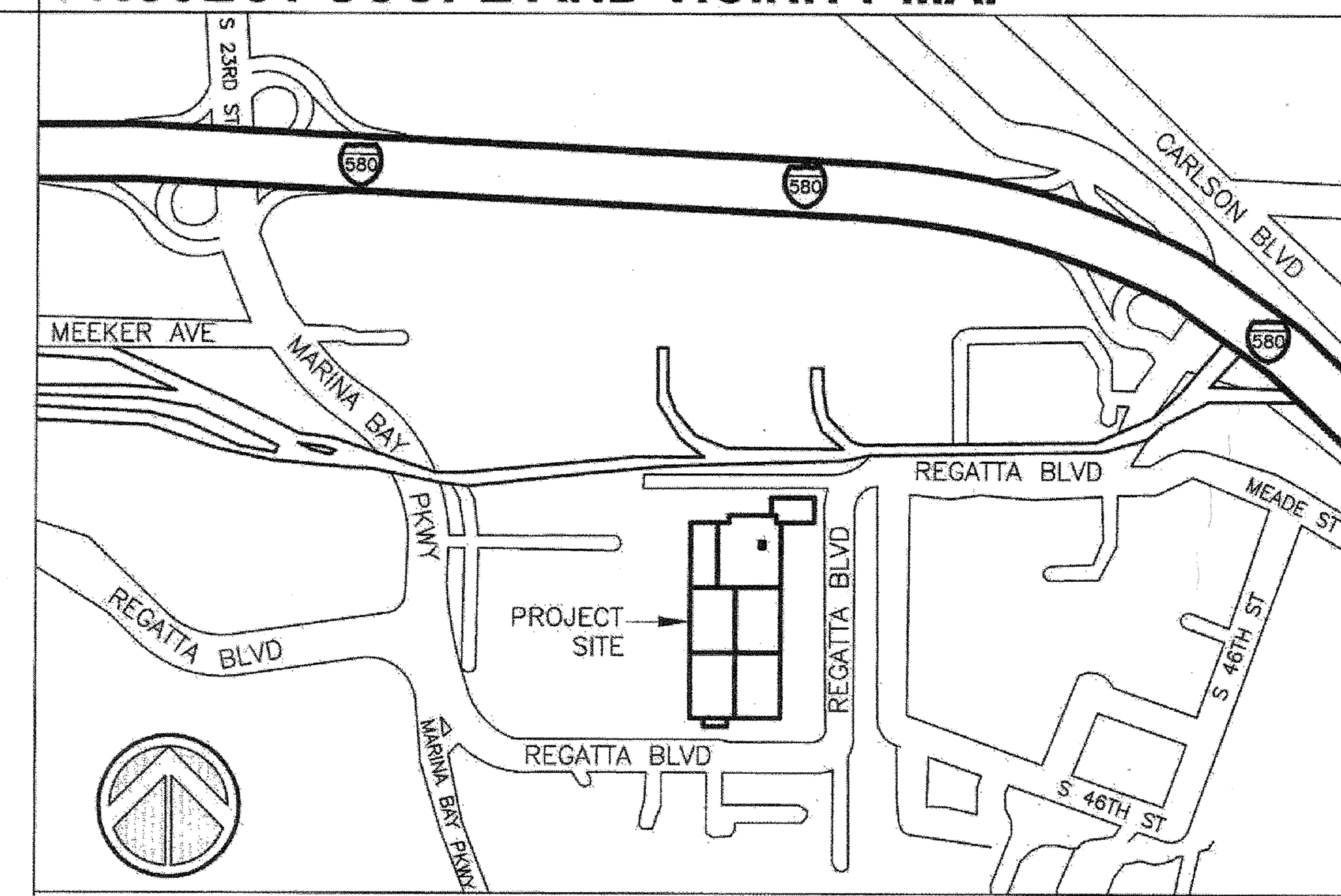
REVIEW AND APPROVALS

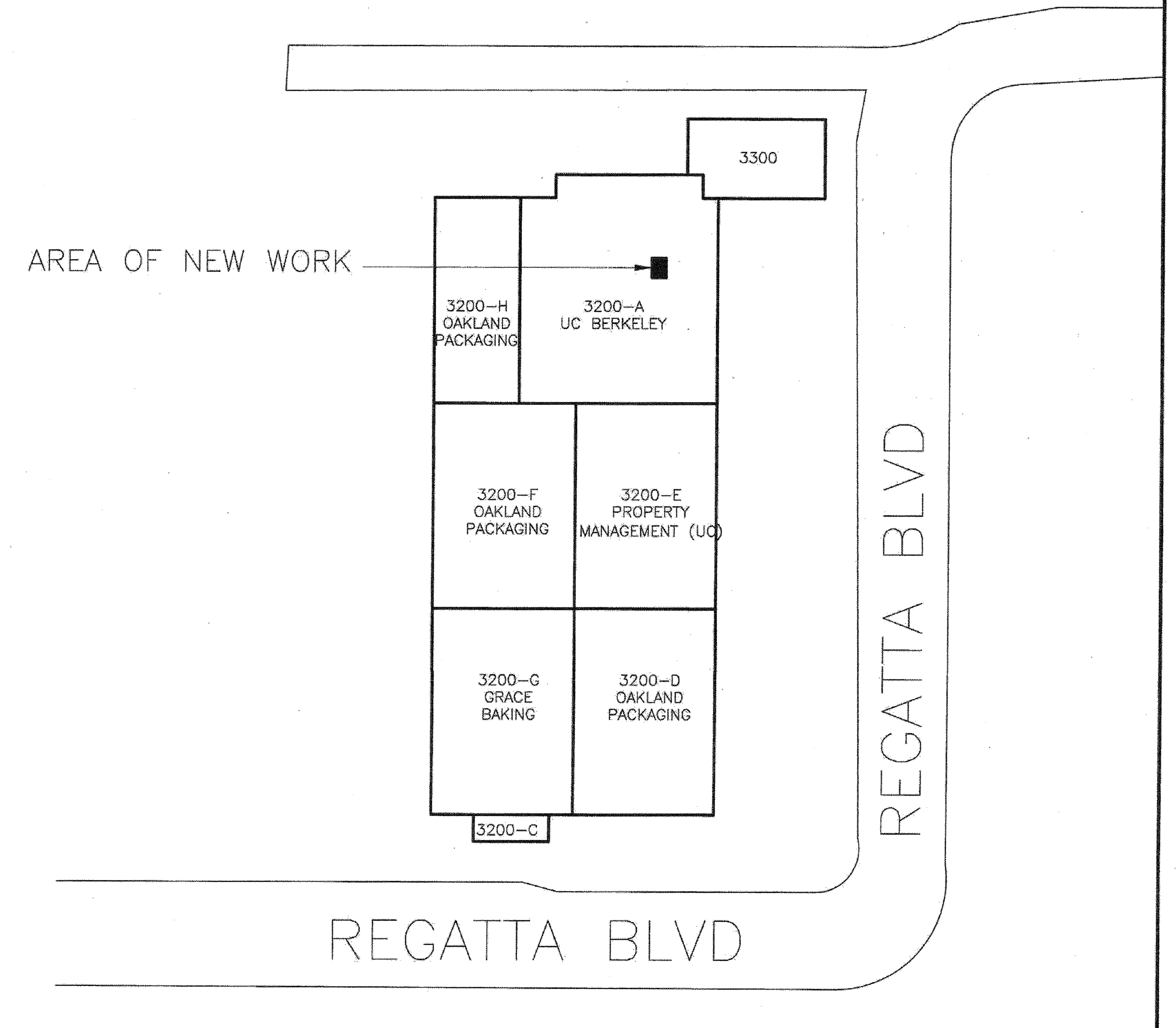
UNIVERSITY OF CALIFORNIA AT BERKELEY
CAPITAL PROJECTS

UNIVERSITY OF CALIFORNIA AT BERKELEY
FIRE MARSHAL

DIVISION OF THE STATE ARCHITECT
(ACCESS ONLY REVIEW)

PROJECT SCOPE AND VICINITY MAP





INDICATION OF MATERIALS

GLAZING — BLOCKING OR FRAMING, CONTINUOUS — BLOCKING OR FRAMING, DISCONTINUOUS — PLYWOOD — GYP. BD. — STEEL — ALUMINUM — TILE

ABBREVIATIONS

(align symbol)	ALIGN
∠	ANGLE (DEGREES)
&	AND
(E)	EXISTING
(N)	NEW
@	AT
AB	ANCHOR BOLT
ACOUS	ACOUSTICAL
ADD	ADDENDUM
ADD'L	ADDITIONAL
ADJ	ADJACENT / ADJUSTABLE
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
ANOD	ANODIZED
APPROX	APPROXIMATELY
ARCH	ARCHITECT(URAL)
ASPH	ASPHALT
BD	BOARD
B/N	BETWEEN
BEV	BEVELED
BLDG	BUILDING
BLK'G	BLOCKING
BM	BEAM
BO	BOTTOM (OF)
CB	CATCH BASIN
CEM	CEMENT
CER	CERAMIC
CFMF	COLD FORMED METAL FRAMING
CG	CORNER GUARD
CIP	CAST-IN-PLACE
CL	CENTER LINE
CLG	CEILING
CLR	CLEAR
CMU	CONCRETE MASONRY UNIT
CNTR	COUNTER
COL	COLUMN
CONC	CONCRETE
CT	CERAMIC TILE
CTR	CENTER
CTSK	COUNTERSINK
DEG	DEGREES
DEMO	DEMOLITION
DIA	DIAMETER
DIM	DIMENSION
DISP	DISPENSER / DISPOSAL
DN	DOWN
DTL	DETAIL
DWG(S)	DRAWING(S)
(E)	EXISTING
EA	EACH
EB	EXPOSED BOLT
EL	ELEVATION
ELEC	ELECTRIC(AL)
EMER	EMERGENCY
EPT	EXTERIOR PAINT
ENCL	ENCLOSED / ENCLOSURE
ENTR	ENTRANCE
EP	ELECTRIC PANEL BOARD
EQ	EQUAL
EQUIP	EQUIPMENT
ETC	ETCETERA
EXT	EXTERIOR
EXTR	EXTRUDED
F/F	FACE TO FACE
FA	FIRE ALARM
FAB	FABRICATE
FAP	FIRE ALARM PANEL
FB	FLAT BAR
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FF	FINISH FLOOR
FIN	FINISH(ED)
FIXT	FIXTURE
FL	FLOOR LINE
FLASH	FLASHING
FLR	FLOOR
FLUOR	FLUORESCENT
FO	FACE OF
FOC	FACE OF CONCRETE
FOF	FACE OF FINISH
FOIC	FURNISHED BY OWNER INSTALLED BY CONTRACTOR
FOM	FACE OF MASONRY
FOS	FACE OF STUD
FRM'G	FRAMING
FT	FOOT / FEET
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GB	GRAB BAR
GB-24	24" LONG GRAB BAR
GB-36	36" LONG GRAB BAR
GB-42	42" LONG GRAB BAR
GC	GENERAL CONTRACTOR
GFI	GROUND FAULT INTERRUPT
GL	GLASS / GLAZING
GND	GROUND
GSM	GALVANIZED SHEET METAL
GWB	GYPSUM WALLBOARD
GYP	GYPSUM
H/C	HANDICAPPED
HDR	HEADER
HDWD	HARDWOOD
HDWE	HARDWARE
HM	HOLLOW METAL
HORIZ	HORIZONTAL
HT	HEIGHT
ID	INSIDE DIAMETER / DIMENSION
IN	INCH
INFO	INFORMATION
INT	INTERIOR
INV	INVERT
J-BOX	JUNCTION BOX
KO	KNOCKOUT
KP	KICK PLATE
LIN	LINEAR
LL	LIVE LOAD
LP	LOW POINT
LT	LIGHT
LTG	LIGHTING
LVR	LOUVER
LWC	LIGHTWEIGHT CONCRETE
MAS	MASONRY
MAT'L	MATERIAL
MAX	MAXIMUM
MECH	MECHANICAL
MFR	MANUFACTURER
MIN	MINIMUM
MIRR	MIRROR
MISC	MISCELLANEOUS
MO	MASONRY OPENING
MTD	MOUNTED
MTL	METAL
MUL	MULLION
(N)	NEW
N/A	NOT APPLICABLE
NIC	NOT IN CONTRACT
NO	NUMBER
NOM	NOMINAL
NTS	NOT TO SCALE
O/	OVER
OA	OVERALL
OC	ON CENTER
OD	OUTSIDE DIAMETER / DIMENSION
OH	OPPOSITE HAND
OPNG	OPENING
P.L.	PROPERTY LINE
PC	PRECAST CONCRETE
PERF	PERFORATED
PL	PLATE
PLAS	PLASTER
PLY	PLYWOOD
PR	PAIR
PT	POINT/PRESSURE TREATED
PTD	PAINT / PAINTED
R & S	ROD & SHELF
RAD	RADIUS
RB	RUBBER BASE / RESILIENT BASE
RCP	REFLECTED CEILING PLAN
RDWD	REDWOOD
REF	REFERENCE
REQ'D	REQUIRED
REV	REVISION
RM	ROOM
RO	ROUGH OPENING
RWL	RAIN WATER LEADER
S/S	STAINLESS STEEL
SAD	SEE ARCHITECTURAL DRAWINGS
SCD	SEE CIVIL DRAWINGS
SCHED	SCHEDULE
SCW	SOLID CORE WOOD
SED	SEE ELECTRICAL DRAWINGS
SF,SQFT	SQUARE FOOT
SHT	SHEET
SIM	SIMILAR
SLD	SEE LANDSCAPE DRAWINGS
SMD	SEE MECHANICAL DRAWINGS
SMS	SHEET METAL SCREW
SPD	SEE PLUMBING DRAWINGS
SPEC	SPECIFICATION
SPKR	SPEAKER
SQ	SQUARE
SSD	SEE STRUCTURAL DRAWINGS
SST	STAINLESS STEEL
STC	SOUND TRANSMISSION CLASS
STD	STANDARD
STL	STEEL
STOR	STORAGE
STRUCT	STRUCTURE/STRUCTURAL
STS	SELF-TAPPING SCREW
SURR	SURROUND
SUSP	SUSPENDED
TBD	TO BE DETERMINED
T&G	TONGUE & GROOVE
THRU	THROUGH
TO	TOP OF
TOB	TOP OF BEAM
TOC	TOP OF CONCRETE
TOD	TOP OF DECK
TOP	TOP OF PLATE OR PARAPET
TOS	TOP OF SLAB
TOW	TOP OF WALL
TPD	TOILET PAPER DISPENSER
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UL	UNDERWRITERS LABORATORIES INC.
UNF	UNFINISHED
UON	UNLESS OTHERWISE NOTED
UTIL	UTILITY
V	VOLTS
VAR	VARIES
VERT	VERTICAL
VIF	VERIFY IN FIELD
W/	WITH
W/O	WITHOUT
WC	WATER CLOSET
WD	WOOD
WF	WIDE FLANGE (STRUCTURAL STEEL)
WNDW	WINDOW
WO	WHERE OCCURS
WP	WORK POINT / WATERPROOF(ING)
WSCT	WAINSCOT
X	BY

GENERAL NOTES

THE PROJECT CONSISTS OF INTERIOR RENOVATION OF PART OF BUILDING A AT 3200 REGATTA BLVD. FOR THE UNIVERSITY OF CALIFORNIA AT BERKELEY AS HAS BEEN INDICATED ON THE LOCATION MAP (ABOVE). WORK IS DESCRIBED BY THE DRAWINGS AND SPECIFICATIONS.

1. WRITTEN DIMENSIONS ON THESE DRAWINGS HAVE PRECEDENCE: DO NOT SCALE DRAWINGS, DIMENSIONS GOVERN. DETAILS SHALL GOVERN OVER PLANS AND ELEVATIONS. DETAIL DRAWINGS AND LARGE SCALE DETAILS SHALL GOVERN OVER SMALL SCALE DETAILS.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS AND CONDITIONS ON THE JOB. NOTIFY THE ARCHITECT OF ANY VARIATIONS FROM THE DIMENSIONS AND CONDITIONS SHOWN ON THESE DRAWINGS.
3. PROVIDE ALL WORK AND MATERIALS IN ACCORDANCE WITH THE LATEST RULES AND REGULATIONS OF ALL APPLICABLE STATE AND LOCAL CODES, LAWS, ORDINANCES AND STATUTES. NOTHING IN THESE DRAWINGS OR SPECIFICATIONS IS TO BE CONSTRUED AS REQUIRING OR PERMITTING WORK CONTRARY TO THESE RULES, REGULATIONS, AND CODES.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND SHALL CHECK ALL DIMENSIONS. ALL DISCREPANCIES SHALL BE CALLED TO THE ARCHITECT'S ATTENTION AND SHALL BE RESOLVED BEFORE PROCEEDING WITH THE WORK.
5. DRAWINGS INDICATE GENERAL AND TYPICAL DETAILS OF CONSTRUCTION. WHERE CONDITIONS ARE NOT SPECIFICALLY INDICATED BUT ARE OF SIMILAR CHARACTER TO DETAILS SHOWN, SIMILAR DETAILS OF CONSTRUCTION SHALL BE USED, SUBJECT TO REVIEW BY THE ARCHITECT. NOTES OF ONE DRAWING OR DETAIL APPLY TO ALL OTHER SIMILAR DRAWINGS OR DETAILS.
6. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE DRAWINGS AND SPECIFICATIONS. WRITTEN INFORMATION TAKES PRECEDENCE OVER GRAPHIC REPRESENTATION.
7. AS A GENERAL GUIDE, DIMENSIONS ARE TAKEN TO FACE OF FINISH, EDGE OF SLAB, AND CENTER LINE OF STRUCTURAL COLUMN GRID LINES, UNLESS OTHERWISE NOTED ON THE DRAWINGS. METAL STUD PARTITIONS ARE DIMENSIONED TO FACE OF FINISH. INTERIOR FACE OF EXTERIOR WALLS ARE DIMENSIONED TO FACE OF FINISH. ELEVATIONS AND DATUM ARE POINTS OF REFERENCE IN THE WORK.
8. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE CONSTRUCTION DOCUMENTS, VISIT THE JOB SITE TO VERIFY EXISTING CONDITIONS, AND NOTIFY THE ARCHITECT AND THE UNIVERSITY PROJECT MANAGER OF ANY PERCEIVED DISCREPANCIES BETWEEN THE PLANS AND THE SITE CONDITIONS BEFORE COMMENCING ANY WORK. CONTRACTOR TO VERIFY THAT THERE ARE NO CONDITIONS PREVAILING THAT WILL PREVENT HIM FROM PROCEEDING WITH A NORMAL, UNINTERRUPTED CONSTRUCTION PROCESS.
9. CONTRACTOR SHALL PROTECT PROPERTY AND ADJACENT SPACES AGAINST DAMAGE. DAMAGES TO EXISTING IMPROVEMENTS TO REMAIN, INCLUDING BUT NOT LIMITED TO, UNDERGROUND UTILITIES, SITE WORK, LANDSCAPING, STRUCTURES AND ADJACENT CONSTRUCTION, SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF, AND AT NO ADDITIONAL COST TO THE UNIVERSITY.
10. "TYPICAL" (TYP.) MEANS IDENTICAL FOR ALL SIMILAR LOCATIONS.
11. "SIMILAR" (SIM.) MEANS COMPARABLE CHARACTERISTICS FOR THE CONDITION NOTED. VERIFY DIMENSIONS AND ORIENTATION WITH DRAWINGS.
12. THE CONTRACTOR SHALL ASSIST IN THE COORDINATION OF "NIC." ITEMS INCLUDING FURNITURE INSTALLATION, EQUIPMENT INSTALLATION, SECURITY, FIRE ALARM, TELEPHONE WORK, ETC.
13. ALL PARTITIONING OF CEILINGS SHALL BE BRACED IN COMPLIANCE WITH THE REQUIREMENTS OF ALL APPLICABLE SEISMIC AND BUILDING CODES.
14. THE CONTRACTOR SHALL PROVIDE METAL BACKING PLATES, OR FIRE TREATED WOOD BLOCKING, AS REQUIRED IN WALLS BEHIND ALL MOUNTED ITEMS OF CASEWORK, ACCESSORIES, ETC.
15. VERTICAL DIMENSIONS ARE MEASURED FROM TOP OF SLAB UNLESS OTHERWISE NOTED.
16. ALL BLOCKING OR SHIM PIECES USED IN THE FINISHED CONSTRUCTION OF THE BUILDING SHALL BE OF FIRE TREATED MATERIALS.
17. MAINTAIN ALL BLDG. SECURITY, FIRE ALARM & FIRE PROTECTION SYSTEMS AT ALL TIMES.
18. ASBESTOS CONTAINING MATERIALS (ACM) SHALL NOT BE INSTALLED ON THIS PROJECT

PROJECT TEAM

CLIENT
UC BERKELEY - REAL ESTATE DIVISION
CONSTRUCTION + DESIGN
1936 UNIVERSITY AVE., 2ND FLOOR
BERKELEY, CA 94704-7027

ARCHITECT
SHAH KAWASAKI ARCHITECTS
1111 BROADWAY, SUITE 1650
OAKLAND, CALIFORNIA 94607

MECHANICAL/ PLUMBING/ ELECTRICAL CONSULTANT
METRO POWER ENGINEERS, INC.
1617 CANYON DRIVE, SUITE 204
PINOLE, CA 94564

DEFERRED SUBMITTALS

1. COLD STORAGE ROOM INCLUDING HVAC, ELECTRICAL AND LIGHTING ARE DESIGN/BUILD. SEE SPECIFICATIONS FOR MORE INFORMATION.
2. FIRE SPRINKLER, FIRE DETECTION AND ALARM ARE DESIGN/BUILD. SEE SPECIFICATIONS FOR MORE INFORMATION.

DRAWING INDEX

CALIFORNIA STATE FIRE MARSHAL
☐ Approved
☑ Approved as noted (No resubmittal required)
☐ Make corrections noted (Resubmit for record)
☐ Not Approved (Revise and resubmit)
☐ Not reviewed (Insufficient data submitted)

APPROVAL OF THIS PLAN DOES NOT AUTHORIZE OR APPROVE ANY OMISSION OR DEVIATION FROM APPLICABLE REGULATIONS. FINAL APPROVAL IS SUBJECT TO FIELD INSPECTIONS. ONE SET OF APPROVED PLANS SHALL BE AVAILABLE ON THE PROJECT SITE AT THE TIME OF INSPECTION.
REVIEWED BY [signature] DATE 9/7/15

RECEIVED
APR 0 2 2015
U.C.B./FIRE PREVENTION

No.	Date	Remarks
	3/2/15	90% CONSTRUCTION DOCUMENT
	3/25/15	100% CONSTRUCTION DOCUMENT - ISSUED FOR BID

SHAH KAWASAKI ARCHITECTS
1111 Broadway, Suite 1650
Oakland, CA 94607

REGATTA FACILITY SYSTEMS AND EQUIPMENT FOR ART AND FILM STORAGE
PN#: 12648A
3200 REGATTA BOULEVARD
RICHMOND, CA 94804

LICENSED ARCHITECT ALAN KAWASAKI C 13476 REN. 2-28-16 STATE OF CALIFORNIA

Drawing Title: TITLE SHEET

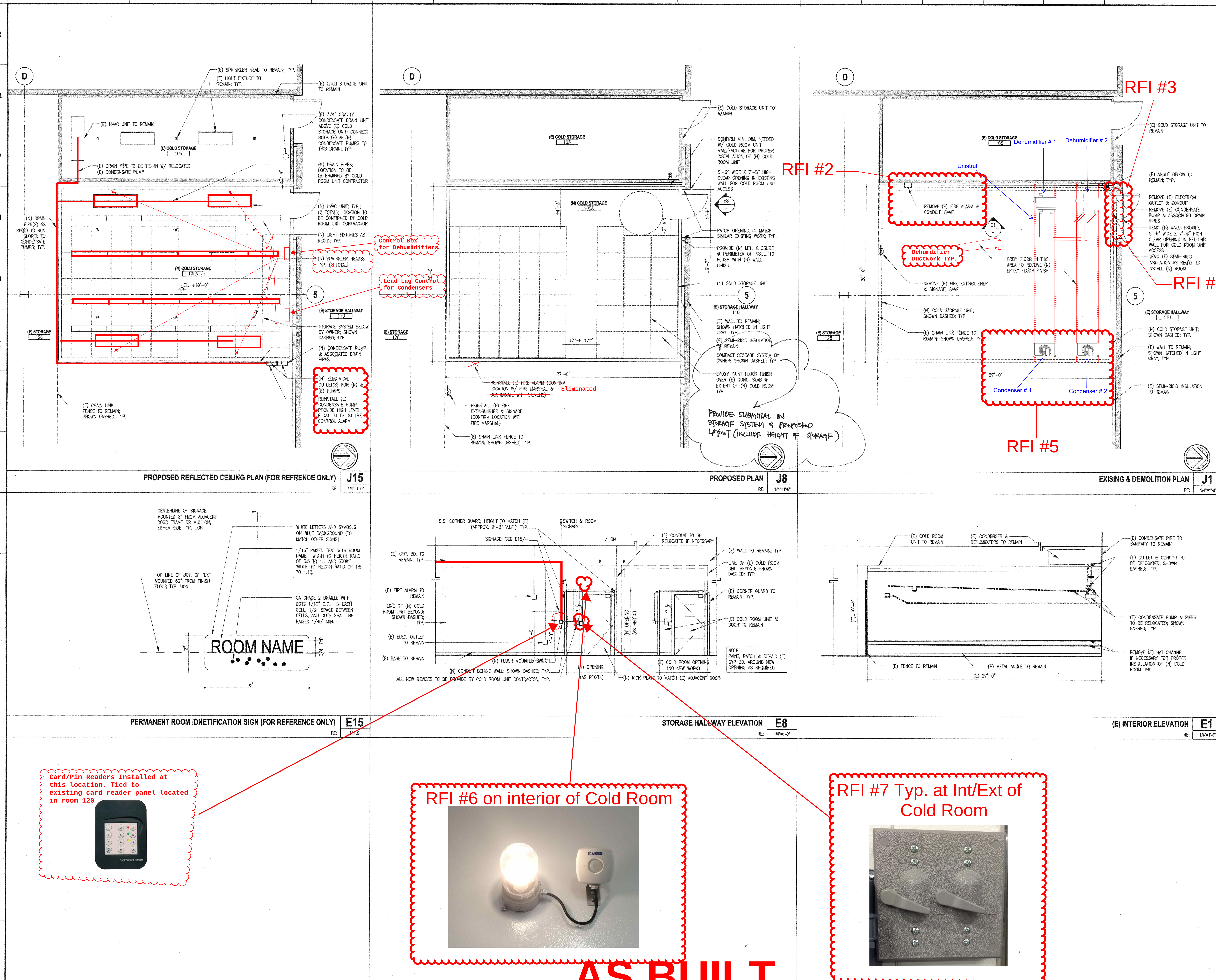
Drawing No. **A-000**

SKA Project Number: 15701.00

AS BUILT

DRAWING NAME: G:\15701.00\Dwgs\Plot\A-000.dwg
PLOT DATE: 03-31-15 2:59pm PLOTTED BY: cdsal

FPT Submittal # 4024
Date recorded: 4/2/15



SHEET NOTES

1. SEAL CONDUITS @ ENTRY POINTS OF COLD BOX PER CEC 300.7 (A).

GENERAL DEMO NOTES

1. ACCESS TO ADJACENT ROOM 128 IS RESTRICTED. REQUEST ACCESS WITH NOTICE FOR WORK OUTSIDE PROJECT AREA, TYP.

COLD STORAGE ROOM NOTES

1. ALL LIGHT FIXTURES, SPRINKLER HEADS, HVAC UNITS AND RELATED COMPONENTS/ACCESSORIES ARE UNDER SCOPE OF COLD STORAGE UNIT CONTRACTOR.
2. VERIFY LOCATION OF HVAC UNITS WITH ARCHITECT PRIOR TO INSTALLATION OF UNITS. CONDENSER UNITS & DEHUMIDIFIER SHALL BE PLACED ON ROOF OF COLD STORAGE ROOM.
3. VERIFY LOCATION OF LIGHT FIXTURES WITH UCB PRIOR TO INSTALLATION.
4. SPRINKLER AND FIRE ALARM SYSTEM ARE PART OF COLD STORAGE UNIT VENDOR'S SCOPE. CONTRACTOR SUBMITS SUBMITTALS TO UNIVERSITY REP WHO FORWARDS TO FIRE MARSHAL AND TO ARCH/MEP.
5. COORDINATE INSTALLATION OF COMPACT SHELVING WITH UCB SHELVING VENDOR.
6. CUT, PATCH AND REPAIR (E) CONDITIONS & FINISHES AS NECESSARY TO INSTALL COLD ROOM FOR A COMPLETE INSTALLATION INCLUDING BUT NOT LIMITED TO: POWER/CONDUIT/DATA/SECURTIY TIE-INS AND INFRASTRUCTURE, FRAMING, GYP. BOARD, RIGID INSULATION, METAL CLOSURES AT PERIMETER OF INSULATION, FLOOR LEVELING AND PATCHING OF (E) IRREGULARITIES, ETC. MATCH ADJACENT CONDITIONS AT CONCLUSION OF WORK.
7. RUN (N) CONDENSATE LINE(S) FROM (N) AND (E) CONDENSATE PUMPS OVER ROOF OF COLD ROOMS AND UP WALL TO (E) SANITARY LINE, ALONG ROUTE OF (E) 3/4" CONDENSATE LINE.

NOTE: If this drawing is not 42"x30" it has been revised from its original size the scales noted on drawing/details are no longer applicable.

No.	Date	Remarks
	3/2/15	90% CONSTRUCTION DOCUMENT
	3/25/15	100% CONSTRUCTION DOCUMENT - ISSUED FOR BID

CALIFORNIA STATE FIRE MARSHAL
☐ Approved
☑ Approved as noted (No resubmittal required)
☐ Make corrections noted (Resubmit for record)
☐ Not Approved (Revise and resubmit)
☐ Not reviewed (Insufficient data submitted)
APPROVAL OF THIS PLAN DOES NOT AUTHORIZE OR APPROVE ANY OMISSION OR DEVIATION FROM APPLICABLE REGULATIONS. FINAL APPROVAL IS SUBJECT TO FIELD INSPECTIONS. ONE SET OF APPROVED PLANS SHALL BE AVAILABLE ON THE PROJECT SITE AT THE TIME OF INSPECTION.
REVIEWED BY ________ DATE 4/7/15

SHAH KAWASAKI ARCHITECTS
1111 Broadway, Suite 1650
Oakland, CA 94607

REGATTA FACILITY SYSTEMS AND EQUIPMENT FOR ART AND FILM STORAGE
PN#: 12648A
3200 REGATTA BOULEVARD
RICHMOND, CA 94804

LICENSED ARCHITECT ALAN KAWASAKI C 13476 REN. 2-28-16 STATE OF CALIFORNIA

Drawing Title: **PLANS & INTERIOR ELEVATIONS**

Drawing No.: **A-101**

SKA Project Number: 15701.00

RFI #2, 5, 7

RODAN BUILDERS, INC.

859 Cowan Rd
Burlingame, CA 94010
Ph 650-508-1700
Fax 650-508-1705

RFI No: 002
Date: 06/25/15

REQUEST FOR INFORMATION

Job No: 15-704 Author: RBI

To: Valerie Zylla
Project Manager
1936 University Ave, Berkeley, CA 94704
510-643-3584

Subject: Horn Strobe Relocation

PLEASE RESPOND BY: ASAP

POTENTIAL COST IMPACT: NO

Project: UC Berkeley Regatta Cold Room
DSA APP #

POTENTIAL SCHEDULE IMPACT: YES

A. REQUEST FOR CLARIFICATION AND/OR INTERPRETATION:

Please indicate if there is a desired location for temporarily relocated horn strobe located on outside of existing cold room.

By: Keith Reynolds Date: 06/25/15

C. ARCHITECT'S RESPONSE:

See response below from UCFM. Provide credit for deleted horn strobe relocation. Coordinate with Seimens for decommissioning of (e) strobe.

By: Brian Leonard, Shah Kawasaki Architects Date: 07/02/15

CC:

THE (E) HORN STROBE ON THE OUTSIDE OF THE (E) COLD RM. CAN BE REMOVED (RELOCATION NOT REQ'D)

Susan Pae
FPD
7.2.15

FPT Submittal # 4168
Date recorded: 6/26/15

RODAN BUILDERS, INC.

859 Cowan Rd
Burlingame, CA 94010
Ph 650-508-1700
Fax 650-508-1705

RFI No: 005
Date: 12/11/15

REQUEST FOR INFORMATION

Job No: 15-704 Author: RBI

To: Valerie Zylla
Project Manager
1936 University Ave., Berkeley, CA 94704
510-643-3584

Subject: Alternating Refrigeration System

PLEASE RESPOND BY: ASAP

POTENTIAL COST IMPACT: NO

Project: UC Berkeley Regatta Cold Room
DSA APP #

POTENTIAL SCHEDULE IMPACT: NO

A. REQUEST FOR CLARIFICATION AND/OR INTERPRETATION:

Please reference spec section 132126 -1.01A5. Calls for "two redundant refrigeration systems with alternating operation". Please clarify if refrigeration sytem needs to be tied into BMS. Also please clarify length desired between cycles for alternating refrigeration system.

By: Keith Reynolds Date: 12/11/15

C. ARCHITECT'S RESPONSE:

No, alternating operation control should not be tied-in to the BMS. Please set alternation of refrigeration units for testing every 36 hours and initial alternation of 200 hours after testing. Per Owner, only temperature and humidity alarm need to be tied-in to the BMS (Section 23 8412-2.10.13).

By: George Arellano 12/15/15 Date:

CC:

RODAN BUILDERS, INC.

859 Cowan Rd
Burlingame, CA 94010
Ph 650-508-1700
Fax 650-508-1705

RFI No: 007
Date: 01/14/16

REQUEST FOR INFORMATION

Job No: 15-704 Author: RBI

To: Valerie Zylla
Project Manager
1936 University Ave., Berkeley, CA 94704
510-643-3584

Subject: Cold Room Lighting Rewire

PLEASE RESPOND BY: ASAP

POTENTIAL COST IMPACT: No

Project: UC Berkeley Regatta Cold Room
DSA APP #

POTENTIAL SCHEDULE IMPACT: No

A. REQUEST FOR CLARIFICATION AND/OR INTERPRETATION:

Confirming RFI per site visit with users. The lighting on the interior of the newly constructed cold room is being rewired. A two gang switch is being installed to control the lighing as laid out in the attached representation. Lighting row "A" is controlled by the right switch closest to door opening (see attached). Lighting row "B" is controlled by the left switch further from the door opening. If both switches are in the "On" position all rows of lighting will remain on in cold room.

By: Keith Reynolds Date: 01/14/16

C. ARCHITECT'S RESPONSE:

By: Date:

CC:

EE's comment/Response:
Bi Level switching of fixtures as indicated in item A above complies with the t24 requirements.

By: Tony Mortera, PE / MPEI

AS BUILT

RFI #3

RODAN BUILDERS, INC.

859 Cowan Rd
Burlingame, CA 94010
Ph 650-508-1700
Fax 650-508-1705

RFI No: 003

Date: 06/25/15

REQUEST FOR INFORMATION

Job No: 15-704 Author: RBI

To: Valerie Zylla
Project Manager
1936 University Ave., Berkeley, CA 94704
510-643-3584

Subject: Relocation of Outlet To Be Removed

PLEASE RESPOND BY: ASAP

POTENTIAL COST IMPACT: No

POTENTIAL SCHEDULE IMPACT: YES

Project: UC Berkeley Regatta Cold Room
DSA APP #

A. REQUEST FOR CLARIFICATION AND/OR INTERPRETATION:

Please indicate if there is a desired location for outlet/conduit discovered when new doorway was cut. Existing outlet has conduit running through the wall away from existing cold room to another outlet. Please see attached photos.

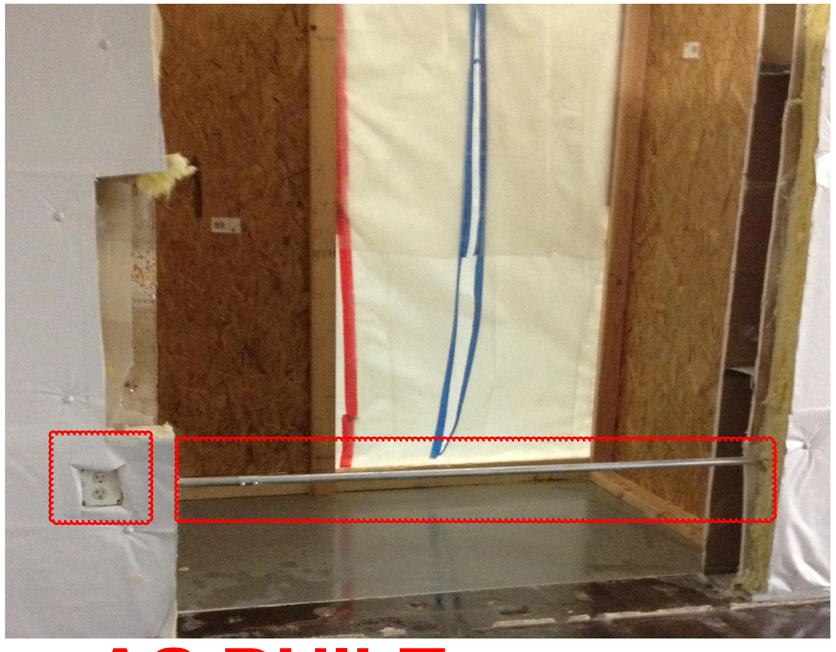
By: Keith Reynolds Date: 06/25/15

C. ARCHITECT'S RESPONSE:

Outlet may be removed, no need to relocate. If conduit is fed from the east, remove conductor, disconnect conduit and abandon per electrical code standards.
If outlet is daisy chained and fed from the west and needs to remain, reroute around (n) wall opening.

By: Brian Leonard, Shah Kawasaki Architects Date: 07/02/15

CC:



AS BUILT

RFI #4

RODAN BUILDERS, INC.
859 Cowan Rd
Burlingame, CA 94010
Ph 650-508-1700
Fax 650-508-1705

RFI No: 004
Date: 07/16/15

REQUEST FOR INFORMATION

Job No: 15-704 Author: RBI

To: Valerie Zylla
Project Manager
1936 University Ave., Berkeley, CA 94704
510-643-3584

Subject: Header Detail for New Opening

PLEASE RESPOND BY: 7/17/2015

POTENTIAL COST IMPACT: No

POTENTIAL SCHEDULE IMPACT: Yes

Project: UC Berkeley Regatta Cold Room
DSA APP #

A. REQUEST FOR CLARIFICATION AND/OR INTERPRETATION:

Please reference A-101/J8. RBI in need of header detail at new opening. Please clarify.

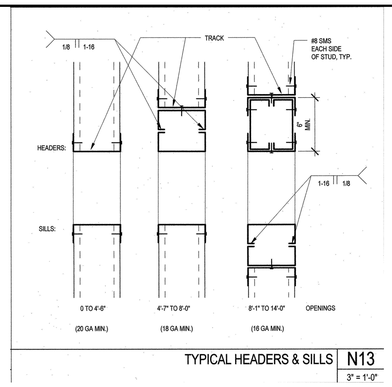
By: Keith Reynolds Date: 07/16/15

C. ARCHITECT'S RESPONSE:

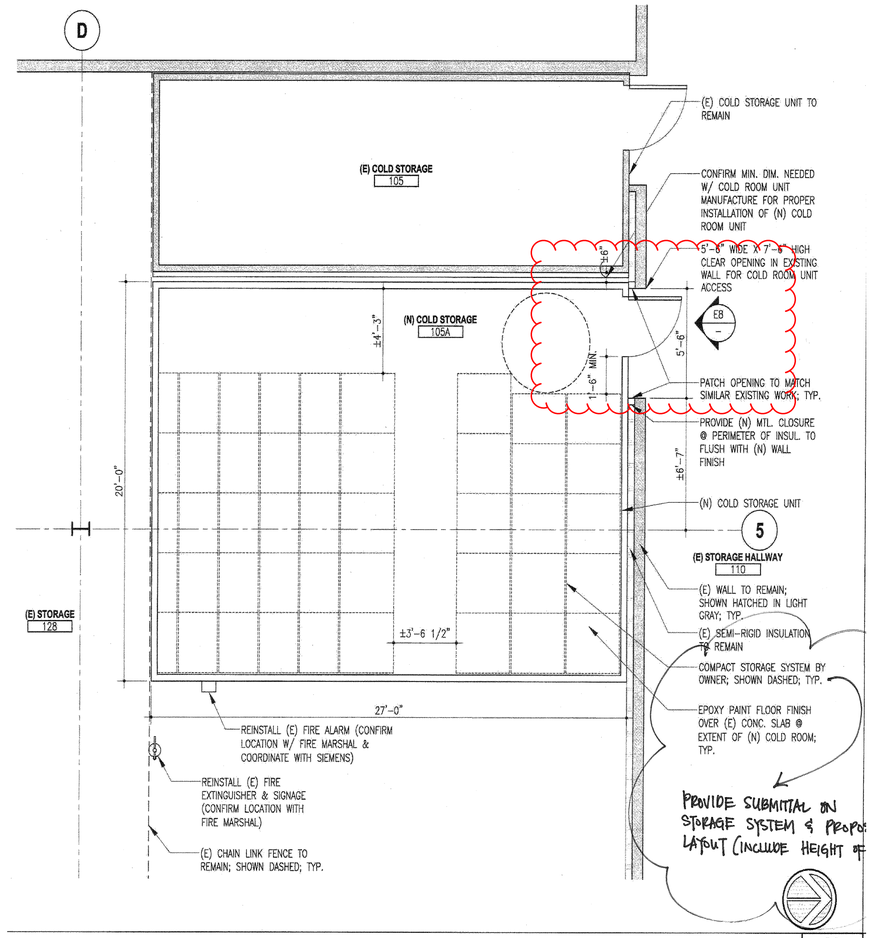
Per standard industry standard, frame opening as required to support loads of (e) studs above. See standard rule of thumb opening header framing detail below. Finish/patch jambs & head to match adjacent condition at (e) cold room.

By: Brian Leonard, Shah Kawasaki Architects Date: 07/17/15

CC:



TYPICAL HEADERS & SILLS N13
3" = 1'-0"



PROPOSED PLAN J8
RE: 1/4"=1'-0"

AS BUILT

RFI #6

RODAN BUILDERS, INC.
859 Cowan Rd
Burlingame, CA 94010
Ph 650-508-1700
Fax 650-508-1705

RFI No: 006

Date: 12/11/15

REQUEST FOR INFORMATION

Job No: 15-704 Author: RBI

To: Valerie Zylla
Project Manager
1936 University Ave., Berkeley, CA 94704
510-643-3584

Subject: Desired Motion Sensor Delay Setting

PLEASE RESPOND BY: ASAP

POTENTIAL COST IMPACT: NO

Project: UC Berkeley Regatta Cold Room
DSA APP #

POTENTIAL SCHEDULE IMPACT: NO

A. REQUEST FOR CLARIFICATION AND/OR INTERPRETATION:

Please confirm desired delay setting for motion sensor. Currently the sensor is set to 80% sensativity with a 5 minute delay. If this is acceptable please indicate so in your response. 80% sensativity with a 2 minute delay is the recommenede factory setting (reference attachment). Please confirm.

By: Keith Reynolds Date: 12/11/15

C. ARCHITECT'S RESPONSE:

Set initially at 10 minutes delay. User should determined desired or final delay time.
George Arellano 12/15/15

By: Date:

CC:

AS BUILT

1901 Motion Sensor

GreenGuard BY KASON INDUSTRIES

Installation:

1. The ideal location for the sensor is above door aimed to 8' in front of the doorway. To limit false tripping keep away from fans and vent ports. See "Sensor Set Up and Testing."
2. Thread the ½ NPT arm into a threaded 90° elbow, junction box or into light fixture housing. It is best to be able to adjust rotation and tilt of the sensor.
3. Connect the line voltage, neutral and load wires to the sensor leads as shown in wiring diagram (pg. 2).
4. Test the sensor for sensitivity and range (pg. 2). This unit is pre-set based on typical walk-in applications for a 2 minute delay and 80% sensitivity. If your application requires alternate settings, simply remove the front cover (2 screws & seals) and make the necessary changes. Remember to reinstall the two screw seals when finished.

Factory Settings

1 2 PIR Sensitivity	3 4 5 Delay	6 7 8 Sensor
↓ ↓ 100% high	↓ ↓ ↓ 10 seconds	↓ ↓ ↓ (factory)
↓ ↑ 90%	↓ ↓ ↑ 20 seconds	
↑ ↓ 80% (factory)	↓ ↑ ↓ 30 seconds	
↑ ↑ 70%	↓ ↑ ↑ 1 minute	
	↑ ↓ ↓ 2 minutes (factory)	
	↑ ↓ ↑ 5 minutes	
	↑ ↑ ↓ 10 minutes	
	↑ ↑ ↑ 20 minutes	

Confirm delay setting with users

Sensor Assembly

Specifications:

Voltage: 120 / 277 VAC @ 60 Hz
Load: 120 VAC / 0- 880W ballast
277 VAC / 0 1200W ballast
Time Delay: 10 seconds – 20 minutes
Size: 4"H x 4"W x 2.16"D
[102.58cm*102.58cm*55cm]
Weight: 0.5 lbs [227 grams]
Temperature:
Min: -20 °F [-28.9 °C]
Max: 160 °F [60 °C]
Electrical Connection:
½" conduit connection
18" 18 AWG wire
IP 65
Wire temperature 105 deg C max *
cULus Wet location -Indoor Use Only
NSF
Protective Device:
A fast blow fuse or circuit breaker mounted within 25 feet from sensor (**Line** side) is required.

***Some incandescent fixtures may require higher temperature wires. Remote mounting or adding fiberglass sleeves over the wires may be required.**

WARNINGS AND CAUTIONS:

- All installation must comply with local and National Electrical Codes.
- The manufacturer assumes no responsibility for improper installation or application.
- Turn off electricity at the breaker or fuse box before installation.

Special Note from the field:

Always disable any existing light switches. The motion sensor will not function as intended if the customer can turn the circuit off or has the ability to override the motion sensor.

IS-1901 R6
12/15/14

18"/36"D (CAPACITY-8 380 LINEAR INCHES)

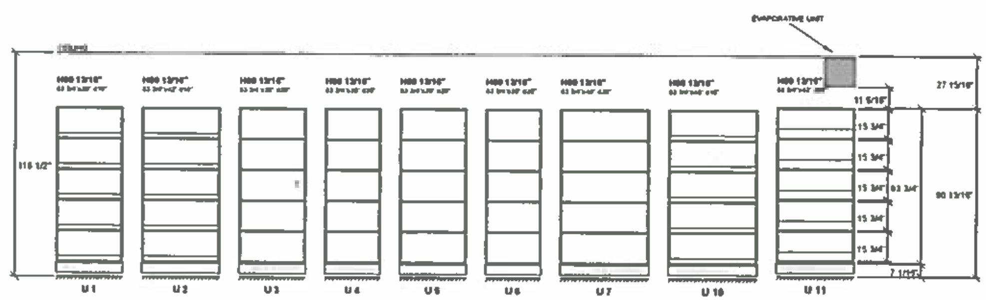
28"D (CAPACITY-4 820 LINEAR INCHES)

System Weight Summary Report

Total media weight	66 000.00 lbs	
Total equipment weight	10 631.54 lbs	
Total pickled weight	0.00 lbs	
Total axle weight (15 lbs/ft²)	1 922.70 lbs	
Total system (media, equipment and axle) weight	78 554.24 lbs	
Total Foot-Print area	462.71 ft²	
Total weight load per square foot (avg unit load)	169.78 lbs/ft²	
Maximum Deflection Allowed is	L/700	
Weight load (line load*) under front rail	23 540.93 lbs	905.06 lbs/ft
Weight load (line load*) under rail no. 2	29 562.20 lbs	1,136.55 lbs/ft
Weight load (line load*) under back rail	22 562.23 lbs	868.20 lbs/ft

*Live Load calculations do not include weight of adjacent static shelving, floor, ramp, or aisles.

MEDIA WEIGHT BASED ON 1200' FILM REEL STEEL CAN AT 8.00 LBS/IN.



COLOR SELECTION
APPROVED BY
PRINT NAME

Approval
Drawings Approved By
Print Name
Date

Floor Covering

System:

Shelving Type:

Options Included:

Notes:

Project Name:

UC Berkeley Pacific Film Archive Storage, Regatta Boulevard, Richmond, CA 94804

SSI Partners in Progressive Storage Solutions

Saved Date 08/20/2015		Project No 10147	
Printed Date 08/20/2015		Revision R8	
Scale 1:65		Total Actual LFI 13200 LFI	
Rep LEIBER,BRAD	Drwn by T.R.C.	Sheet No 1 of 1	

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Approved for Berkeley Art Museum 8/22/15 [signature] Owner's Representative UCB